CONTENTS

Preface vii

INTRODUCTION

Technology's Vanishing Wellspring 1

Richard S. Rosenbloom and William J. Spencer

PART ONE

The Institutional Context of Research and Innovation in Industry

- CHAPTER 1 The Evolution of Industrial Research in the United States 13

 David A. Hounshell
- CHAPTER 2 The Roles of Universities in the Advance of Industrial Technology 87

 Nathan Rosenberg and Richard R. Nelson
- CHAPTER 3 Strategic Alliances and Industrial Research 111
 David C. Mowery and David J. Teece

PART TWO Perspectives from Practice 131

- CHAPTER 4 Research and Change Management in Xerox 133 Mark B. Myers
- CHAPTER 5 Reinventing Research at IBM 151
 John Armstrong
- CHAPTER 6 The Future of Industrial R&D, or, Postcards from the Edge of the Abyss 155
 Peter R. Bridenbaugh
- CHAPTER 7 Some Personal Perspectives on Research in the Semiconductor Industry 165
 Gordon E. Moore

PART THREE Reconceptualizing Research and Innovation 175

- CHAPTER 8 Commercializing Technology: Imaginative Understanding of User Needs 177

 Dorothy Leonard-Barton and John L. Doyle
- CHAPTER 9 Rethinking the Role of Industrial Research 209
 Mark B. Myers and Richard S. Rosenbloom

CONCLUSION Shaping a New Era 229

Richard R. Nelson, Richard S. Rosenbloom, and William J. Spencer

References 241

Index 265

About the Contributors 275